

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Atty. Docket

ANNE KIENAPPEL

DE 000121

Serial No.

Group Art Unit

Filed: CONCURRENTLY

Ex.

Title: PHONEME ASSIGNING METHOD

Commissioner for Patents  
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Sir:

Prior to calculation of the filing fee and examination, please amend the above-identified application as follows:

IN THE CLAIMS

Please amend the claims as follows:

3. (amended) A method as claimed in claim 1,  
characterized

in that the similarity parameter in accordance with the symbol phonetic description contains information about an assignment of the respective phoneme ( $P_k$ ) and about an assignment of the respective basic phoneme units ( $PE_i(P_k)$ ,  $PE_j(P_k)$ ) to phoneme symbols and/or phoneme classes of a predefined phonetic transcription (SAMPA).

4. (amended) A method as claimed in one of the claims 1,  
characterized

in that with one of the speech data controlled assigning methods (1) in a first step using speech data (SD) of the target language, phoneme models are generated for the phonemes ( $P_k$ ) of the target language, and then for all the basic phoneme units ( $PE_1, PE_2, \dots, PE_N$ ) a respective difference of the basic phoneme model of the basic phoneme unit from the phoneme models of the phonemes ( $P_k$ ) of the target language is determined, and the respective basic phoneme unit ( $PE_i(P_k)$ ) that has the smallest difference parameter is assigned to the phonemes ( $P_k$ ) of the target language.

5. (amended) A method as claimed in one of the claim 1, characterized

in that in a speech data controlled assigning method (2) speech data (SD) of the target language are segmented into individual phonemes ( $P_k$ ) while phoneme models of a defined phonetic transcription are used, and for each of these phonemes ( $P_k$ ) in a speech recognition system, which comprises the set of basic phoneme models of the basic phoneme units ( $PE_1, PE_2, \dots PE_N$ ) to be assigned, recognition rates for the basic phoneme models are determined and to each phoneme ( $P_k$ ) is assigned the basic phoneme unit ( $PE_j(P_k)$ ) for whose basic phoneme model the best recognition rate was detected the most.

6. (amended) A method of generating phoneme models for phonemes of a target language to be implemented in automatic speech recognition systems for this target language, in which, in accordance with a method as claimed in claim 1, basic phoneme units

are assigned to the phonemes of the target language, which basic phoneme units are described by respective basic phoneme models which were generated with the aid of available speech data of a source language different from the target language, and in which then for each target language phoneme the basic phoneme model of the assigned basic phoneme unit is adapted to the target language while the speech data of the target language are used.

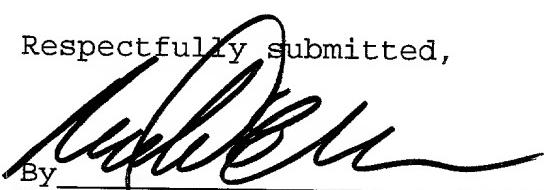
7. (amended) A computer program with a program code means for carrying out all the steps as claimed in claim 1 when the program is run on a computer.

REMARKS

The foregoing amendments to the claims were made solely to avoid filing the claims in the multiple dependent form so as to avoid the additional filing fee.

The claims were not amended in order to address issues of patentability and Applicant respectfully reserves all rights she may have under the Doctrine of Equivalents. Applicant furthermore reserves her right to reintroduce subject matter deleted herein at a later time during the prosecution of this application or continuing applications.

Respectfully submitted,

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## APPENDIX

3. (amended) A method as claimed in claim 1-~~or 2~~, characterized in that the similarity parameter in accordance with the symbol phonetic description contains information about an assignment of the respective phoneme ( $P_k$ ) and about an assignment of the respective basic phoneme units ( $PE_i(P_k)$ ,  $PE_j(P_k)$ ) to phoneme symbols and/or phoneme classes of a predefined phonetic transcription (SAMPA).

4. (amended) A method as claimed in one of the claims 1-~~to 3~~, characterized in that with one of the speech data controlled assigning methods (1) in a first step using speech data (SD) of the target language, phoneme models are generated for the phonemes ( $P_k$ ) of the target language, and then for all the basic phoneme units ( $PE_1$ ,  $PE_2$ , ...,  $PE_N$ ) a respective difference of the basic phoneme model of the basic phoneme unit from the phoneme models of the phonemes ( $P_k$ ) of the target language is determined, and the respective basic phoneme unit ( $PE_i(P_k)$ ) that has the smallest difference parameter is assigned to the phonemes ( $P_k$ ) of the target language.

5. (amended) A method as claimed in one of the ~~claims 1 to 4~~claim 1, characterized in that in a speech data controlled assigning method (2) speech data (SD) of the target language are segmented into individual

phonemes ( $P_k$ ) while phoneme models of a defined phonetic transcription are used, and for each of these phonemes ( $P_k$ ) in a speech recognition system, which comprises the set of basic phoneme models of the basic phoneme units ( $PE_1, PE_2, \dots PE_N$ ) to be assigned, recognition rates for the basic phoneme models are determined and to each phoneme ( $P_k$ ) is assigned the basic phoneme unit ( $PE_j(P_k)$ ) for whose basic phoneme model the best recognition rate was detected the most.

6. (amended) A method of generating phoneme models for phonemes of a target language to be implemented in automatic speech recognition systems for this target language, in which, in accordance with a method as claimed in ~~one of the preceding claims~~claim 1, basic phoneme units are assigned to the phonemes of the target language, which basic phoneme units are described by respective basic phoneme models which were generated with the aid of available speech data of a source language different from the target language, and in which then for each target language phoneme the basic phoneme model of the assigned basic phoneme unit is adapted to the target language while the speech data of the target language are used.

7. (amended) A computer program with a program code means for carrying out all the steps as claimed in ~~one of the preceding claims~~claim 1 when the program is run on a computer.